VIII. Glossary

Adjuncts	Raw materials other than malt used in making beer which are extract producing. Common grain adjuncts are corn, rice, wheat barley and soybean products. Most would be in the form of derivatives such as flakes, grits, meals or syrups. Other adjuncts such as honey, cane sugars and syrups are widely used.
Alcohol	A colorless, volatile flammable liquid, C_2H_50H, that is the intoxicating agent in fermented and distilled beverages: ethyl alcohol. Produced by the fermentation of sugars.
Alcohol-free	A labeling term that may only be used on labels of malt beverage products containing no alcohol. Compare with "non-alcoholic".
Alcohol by volume	The percent of alcohol present on a volume basis in a liquid. Example: 10 oz. of beer with an alcoholic content of 5.0% by volume would contain 5% of 10 oz. or 0.5 oz (1/2 oz) of 100% ethyl alcohol (200 proof).
Alcohol by weight	The percent of alcohol on a weight basis. Since alcohol (specific gravity of approximately 0.8) weighs less than water (specific gravity 1.0) the percent of alcohol by weight will always be less than that by volume. Beer with an alcohol content of 5.0% by volume has an alcohol content of approximately 4.0% by weight.
Ale	A type of beer with a pronounced hop aroma and flavor; paler in color and more tart in taste than Lager Beer. In the brewing of ale a top fermenting type of yeast is usually used, whereas in Lager Beer a bottom fermenting yeast is used. Its alcohol content is usually higher than Lager, often being from 4.0%-5.0% alcohol by weight.
Attenuation	The decline in specific gravity of wort during fermentation.
Balling	The reading obtained by the use of a Balling Saccharometer which is graduated to read directly in percent by weight of extract at 6O° F. Also called Original Gravity and Plato.

Barley	The principle grain used in producing malt, the basic material for producing beer.
Barrel	The standard industry measurement of beer production, equaling 31 gallons. It is the equivalent of 13.8 cases of 24 12-ounce cans or bottles.
Beechwood aging	The use of beechwood chips during the aging process at some breweries to aid secondary fermentation.
Beechwood chips	Wooden strips made of beechwood approximately one inch wide and 5 to 10 inches long. These are added to beer in storage tanks to aid in secondary fermentation.
Beer	A liquid resulting from the fermentation of a water extract of malt, hops and/or other' grains, grain products, syrups or sugars containing ½% or more of alcohol by volume. The term includes any fermented malt beverage. As defined by 27 CFR 25.11 - "Beer" means beer, ale, porter, stout and other similar fermented beverages (including sake or similar products) of any name or description containing one half of one percent or more of alcohol by volume, brewed or produced from malt, wholly or in part, or from any substitute.
Beer stone	A grayish-brown deposit on the surface of equipment in prolonged contact with beer.
Bock beer	A specially prepared beer in which a longer roasted malt (caramel malt) is used. Coloring agents such as sugar coloring or caramel, may also be used. Bock is darker in color and has a sweeter taste than Lager Beer. A seasonal brew, Bock is usually brewed in the winter for consumption in the spring about Easter time.
Bottom-fermented beer	A beer that is fermented at a low temperature (43-52° F) using a type of yeast which settles to the bottom. Lagers, pilsners, bocks and Munchner are examples of beers in this category. Most American beers are bottom-fermented.
Brewhouse	That part of a brewery where brewing materials are processed into wort suitable for fermentation.
Brew kettle	A cylindrical or pear shaped vessel heated by a steam jacket or steam coils in which wort from the mashing procedure is boiled with added

hops for several hours. This coagulates undesirable proteins, sterilizes the wort, and extracts flavor from hops.

Brewer's yeast Excess yeast collected from fermenters during or after fermentation which is either run down the sewer or sold for the preparation of stock foods and medical products or other legitimate purposes including sale to other brewers for use in the production of beer.

Brewery The land and buildings where beer is produced and packaged.

Brewer A person who brews or produces beer for sale.

Brew pub A brewery which contains a tavern where beer and other alcoholic beverages are sold directly to consumers at retail.

Bung A plug of wood or plastic used for closing the bunghole in a keg.

Caramel malt A malt made from regular malt which is subjected to high heat so that part of the sugar in the grain kernels is caramelized. Used in the brewing of dark beers such as bock, stout, porter to impart color and flavor.

Carbon dioxide A gas, $C0_2$, which is a natural product of fermentation. Wort sugars are converted into alcohol and $C0_2$ during fermentation.

Cereal beverage A beverage, produced either wholly or in part from malt (or substitute for malt), and either fermented or unfermented, which contains less than ½ of one percent of alcohol by volume. Sometimes called "Near Beer". This product is not taxable but its production and removal are regulated by the beer regulations.

Colloidal haze The combining of high molecular weight proteins and tannins at refrigerated temperatures which can cause beer to become cloudy. To reduce colloidal haze, brewers use chillproofing techniques.

Cooker Usually a cylindrical tank equipped with a stirrer and heated by a steam jacket where most cereal adjuncts are cooked to break down the cell walls surrounding the starch granules and gelatinize the starch. After cooking, the product is run into the mash tub or tank where the starch is converted to sugars by enzymes from the malt.

Cooler Any type of apparatus or equipment that cools hot wort from the brew kettle before it reaches the fermenters. Various types are Coolship, Baudelot, Plate, Shell and Coil, and Double Pipe.

Counter A mechanical or electrical device that counts units such as the number of bottles, cans, kegs or pallets passing through it on a production line.

Crowner Equipment for placing closures of bottle caps on bottled beer after filling.

Cullet Broken or damaged bottle glass. Often this glass is recycled.

Dark beer A dark colored beer, usually bottom- fermented. It is either produced by 1) using caramelized or roasted malt as a mashing raw material which imparts color, or by 2) adding liquid caramelized sugars or malts in the storage cellars or to kegs of beer at the time of filling.

Diatomaceous earth Diatomaceous earth is the skeletal remains of microscopic plants which were deposited in ocean and lake bottoms 21 million years ago. It is mined, ground, sterilized and calcined into a filter medium.

Draft or draught Beer drawn from a keg or cask. Also called tap beer. Beer packaged in a container holding one or more gallons may be described as draft beer if the contents are tap-drawn.

Unpasteurized beer requiring refrigeration for preservation, or beer that has been sterile filtered and aseptically filled, and packaged in normal bottles and cans, may also be described as draft beer.

Pasteurized beer packaged in normal bottles and cans may be described as “draft brewed,” “draft beer flavor” if the label or advertisement states the beer has been pasteurized.

Dry beer A beer that is fermented with special yeast for a longer period of time than regular beers; since more sugar ferments out, this results in a less sweet but more alcoholic beer.

Ebulliometer An instrument used to determine, in percent by volume, the alcoholic strength of alcoholic liquids. The boiling point of water, which varies because of barometric pressure, and the boiling point of the alcoholic liquid is ascertained by use of the Ebulliometer. By following instructions in its use and the tables provided, alcoholic strength results.

Extract The total solids contained in wort. Solids result from extraction of soluble portions of brewing materials by water and heat in the mashing process. A Saccharometer measures the percent by weight of extracts in the solution.

Fass or fassing Transferring beer from the fermenting cellars to storage cellars. A

German word.

Fermentation The process by which yeast feeds on sugars converting them into alcohol and carbon dioxide. At breweries, wort is fermented by the addition of about one pound of yeast per barrel of wort which results in beer after about seven days.

Filler Equipment that fills bottles or cans.

Government cellars A term applied to refrigerated rooms at breweries where beer, after passing through the packaging meters, is stored in tanks while waiting to be packaged.

Grant A trough, usually horizontal, with a removable cover having pipes leading into and back to the lauter tub and a pipe to the brew kettle, all controlled with valves. At the grant, the straining of extract can be observed, tested with a saccharometer, and recirculated back to the lauter tub for clarification.

Green beer Beer immediately after primary fermentation prior to lagering or aging; also called "ruh" beer. Green beer of a slightly different type can also be found across the country every March 17.

Flocculation To form masses. An important characteristic in the assessment of yeast is its tendency to flocculate.

High-gravity beer Beer in the storage cellars having a high amount of solids and alcohol resulting from producing wort with a high extract content. This beer is blended with deaerated water in the storage cellars before passing through the meters for packaging purposes.

Hop strainer A hop strainer separates hop solid residues from wort directly after the brew kettle operation. It is not used when hop extracts or pellets are used.

Hops Clusters of the blossoms of the female hop plant. Oils and resins in them impart aroma and bitterness to beer. They also contain tannins which have an antiseptic quality that aids in the preservation of beer. Hops are received and added at the brew kettle in a dried compacted form or as pellets or as a liquid extract.

Kettle break Coagulation of protein matter during boiling.

Krausen The foam layer which forms on the top of the fermenting wort.

Krausening	The process of adding a small quantity of actively fermenting wort to beer in closed finishing tanks causing a secondary fermentation with the object of producing a substantial portion of the beer's carbon dioxide content. Thus the finished beer does not need to be carbonated by the injection of carbon dioxide gas which is done in the case of beers not krausened. Also known as naturally induced carbonation.
Lager	A German word meaning "to store."
Lager beer	A bottom-fermented beer which is stored and aged at low temperatures. It is the most widely sold type of beer in the United States today.
Lauter tub	A type of tank used at some breweries for the purpose of separating spent grain from the wort after receipt from a mash tank. The wort minus the spent grain is then run into the brew kettle.
Light beer	A bottom-fermented beer having less calories than normal beer.
Low alcohol	The terms "low alcohol" or "reduced alcohol" may only be used on the labels of malt beverage products containing less than 2.5% alcohol by volume.
Malt	A product made from grain, almost always barley, used as a raw material in making beer. Malt is made by 1) soaking grain in water, 2) draining, 3) spreading the wet grain on a floor or in a perforated bottom compartment where it germinates and sprouts and 4) drying the wet sprouted grain where growth stops and the sprouts drop off. Malting develops enzymes in the grain, which chemically changes starch in grain into sugar, which is a yeast food.
Malt liquor	A bottom-fermented beer usually having a higher than normal alcoholic content. It is brewed with several varieties of malts and hops and is generally fruity and spicy in flavor.
Mash filter	A type of filter in use at some breweries. Placed between the mash tank and the brew kettle, it separates spent grain from wort. It replaces a lauter tub.
Mashing	An initial step in brewing where ground malt alone or malt and adjuncts are mixed with water in a vessel using heat and time controls. The conversion of starches to fermentable sugars takes place and solubles are extracted. The resultant solution is "wort" and the soluble matter in the wort is "extract."
Meter	Mechanical or electronic equipment set in pipelines which measures the

quantity, in barrels and fractions, of beer flowing through.

Munchner type beer A bottom-fermented beer, usually having a fuller malt flavor, somewhat dark, and sweeter due to the use of less hops.

Non-alcoholic The term non-alcoholic may be used on the labels of malt beverage products, provided that the statement "contains less than 0.5% alcohol by volume" appears in direct conjunction with the word non-alcoholic.

Original gravity Extract of the wort before addition of yeast, determined by the use of a saccharometer.

Package A bottle, can, or keg.

Pasteurization The partial sterilization of a liquid at a temperature (131-158° F) which destroys or inhibits the growth of microorganisms. Yeast could otherwise induce fermentation inside the container causing it to rupture as Carbon Dioxide is produced. At breweries pasteurization may occur in bulk (prior to packaging) or in packages after filling. Some breweries do not pasteurize as such but use a sterile filter and aseptic fill process.

Pilsner A term applied to an especially light, bright, lagered beer. The term originated in Pilsen, Bohemia. It is not a separate type of beer.

Pitching To add yeast to wort.

Porter A top-fermented beer. Caramelized or roasted malt is almost always used as an ingredient. Usually sweet, dark, and medium bodied.

Rack house That part of a brewery where kegs or barrels are filled.

Racking To fill kegs with beer.

Reaumur thermometer A thermometer used extensively in breweries based on 0° at the freezing point of water and 80° at the boiling point.

Rebranding Changing or durably covering the original marks and brands on barrels or kegs.

Ruh Green beer stored in cellars after fermentation. A German word.

Ruh storage Cycle of storage immediately following fermentation. Ruh storage is a rest period during which various substances settle out from the brew.

Saccharometer A form of hydrometer graduated to read directly in percent by weight of

extract (mostly sugars) in a solution.

Shortages Unaccounted for discrepancies (missing quantities) of any ingredient or product, including beer, disclosed by physical inventories. They differ from "losses" which are known quantities lost to breakage, casualty loss, or other unusual cause.

Soaker Equipment for cleaning and sterilizing bottles before filling.

Sparge To distribute water over mash or hops in order to wash out extract.

Spent grains The insoluble malt and adjunct residues remaining after the separation of wort in a lauter tub, mash filter or Strainmaster. These are usually sold for cattle feed.

Steam beer A top-fermented beer using bottom-fermenting yeast having a very high carbon dioxide content. Originated in California.

Sternewirt A tap room at a brewery where beer is served.

Stout A top-fermented beer. Caramelized or roasted malt is used as an ingredient. It is very dark because licorice is added, and tastes sweet with a strong malt flavor. This word also describes what happens when you drink too much beer and get too little exercise.

3.2 Beer Beer containing less than 3.2% alcohol by weight. Required by law in some states, counties, military reservations, college campuses, etc.

Top-fermented beer A beer that is fermented at a high temperature (59-72° F) using a type of yeast which rises to the top. Ales, porters, stouts, and most wheat beers are examples of beers in this category.

Trub An amorphous mass of coagulated protein compounds. It is formed in mashing, boiling and in cooling the wort. Trub will absorb certain constituents of the wort and will entrap other matter (like small hop particles) upon sedimentation. This sediment is removed by settling out in a hot wort tank or starting tank, by filtering, or by centrifugation.

Wort (pronounced "wurt") The sugar extract solution derived from mashing which continues to be called wort in the brewing process until fermentation is complete.

Yeast At breweries it is a thick ivory colored liquid mass composed of living cells that feed on sugars and air, producing alcohol and carbon dioxide in the process. About 1½ lbs. of yeast is added per barrel of wort at the

start of fermentation. The pitching rate depends upon the specific gravity of wort, temperature profile and the desired rate of fermentation.

Yield of extract The number of pounds of extract obtained from 100 pounds of brewing material given in percent.

Zwickel A test cock or sampler on a tank. A German word.